<u>**REMARKS**</u>

The Applicant respectfully requests reconsideration of this application based on the arguments presented below. With this amendment no claims have been amended or cancelled. New claims 14 and 15 have been added. Support for new claims can be found at least in paragraphs [0040] – [0042]. Claims 1-7, 9, and 14 – 15 therefore remain pending in this application.

Rejections under 35 U.S.C. § 102(e)

The Office rejected claims 1, 2, 4 – 7, and 9 as purportedly being anticipated by Swildens et al. (US 2005/0033858) (Swildens). Applicant traverses these rejections.

Prior to addressing each of the rejections in detail, a brief discussion of "advertising" is provided to clarify the meaning of this term. More particularly, advertising is discussed in contrast to the operation of returning an address in response to a DNS request. With this distinction made, Applicant believes it will be very clear that Swildens neither teaches nor suggests all the claim limitations in the claims.

Applicant recognizes that when the Examiner interprets the claims, the claims must be "given [their] broadest reasonable interpretation consistent with the specification." *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). In addition, the broadest reasonable interpretation of the claims *must* also be consistent with the interpretation that those skilled in the art would reach. *In re Cortright*, 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999).

Claim 1, and hence all the claims, include the term "advertising". As used in the claims, advertising is used to indicate an available resource in the network. Advertising is a term that is often used by those skilled in the art to refer to a process by which a network entity, such as a router, can propagate or announce *reachability* information to other network entity peers. *See RFC 1654*, 2. Introduction, (incorporated into the Application by reference). For example, a first router can advertise routing information to another router so that the adjacent router knows that data can be routed through the first router from the other router. Advertising is typically performed as changes occur in the routing connections or periodically, and *not* in response to a request, such as a DNS request. *Id.* 3. Summary of Operation.

One embodiment of advertising is discussed in the present application at paragraph [0034] to illustrate advertising:

> "[t]he anycast address is advertised to the network 72 from each node 76 using a dynamic routing protocol, the Border Gateway Protocol (BGP). The BGP is a routing protocol used to exchange network *reachability* information between Internet border routers. It enables those routers to make *intelligent routing decisions as to the best path*. The BGP is used by such routers as their exterior routing protocol in order to advertise routes to other border routers." Application, [0034].

As used in the Application and as understood by those skilled in the art, advertising is a process performed by a network device to propagate or announce its presence, rather than providing an address in response to a DNS request. In the present application, a DNS device uses advertising to facilitate reachability or stop reachability. To illustrate, in various embodiments, a DNS device normally advertises so that it can be reached under normal conditions. *Application*, [0040] – [0042]. Under other conditions, such as overload conditions, the DNS device may not advertise so that the DNS device will not be reached. *Id.*

By contrast, Swildens describes a load balancing system that includes a traffic management system 105 that provides name and address resolution *in response to requests from local DNS's 113, 115.* Swildens, [0040] (emphasis added). DNS servers (so-called Speedera servers) in the traffic management system 105 act as the traffic controller for the entire network. *Id.*, [0240]. The Speedera DNS servers make decisions about which IP address to return for a given hostname based on a mapping of hostnames to servers and information collected about the state and performance of the servers. *Id.* [0240]. Probes periodically probe the servers in Point of Presence sites 103, 104 for performance criteria (e.g., latency and load) and send the results to the Speedera DNS servers. *Id.* [0265], [0333]. The Speedera DNS servers in the traffic management system 105 store the latency and persistence information from the probes. When a local DNS server queries the Speedera server to resolve a name, the Speedera server returns an IP address that has the ability to serve content for that name and that is best suited the handle the request in terms of load, latency, packet loss and availability. *Id.* [0319].

The present application describes a content distribution system with nodes in which a DNS device associated with a cache server system *advertises* its address unless the cache server system has a load characteristic that exceeds the predefined overload metric. In just one

embodiment, upon reaching a predefined overload threshold, routing software in the DNS server withdraws its BGP routing advertisement. *Application*, [0040]. Under normal conditions, all DNS servers are advertising their addresses to the network, and so a DNS request will be directed to the nearest CDN node. *Id.*, [0041]. If a node becomes heavily overloaded, the node stops advertising its DNS address to the network so that no further requests will be directed to that node. The load in that node will slowly decrease until such time as the node can start accepting new clients, at which time it will start advertising its DNS system address to the network again. *Id.* [0042]. As such, transactions already started will not be interrupted. *Id.*

Referring now to the specific claim rejections, claim 1 recites, in part, <u>advertising, by each of the DNS devices, the common address within the network to indicate that the content is available for retrieval</u> and, for each cache server system having a load characteristic that exceeds the predefined overload metric, <u>discontinuing advertising of the cache server system by an associated DNS device</u>. The Office cites paragraph [0047] of Swildens as allegedly teaching these limitations. Paragraph [0047] is reproduced here:

> "[0047] The DNS server (DNS) can be thought of as the traffic director of the system. It contains a mapping of where resources (grouped by hostnames) have been allocated as well as the current state of each resource and their availability to each client. It receives the static information (the mappings) from the configuration file and the dynamic information (resource availability) from the probes. The configuration file also instructs the DNS server how to weight the various criteria available when making its decisions. The DNS is a fully functional DNS server and is compatible with current versions of BIND. Decision criteria cover such areas as resource availability, resource load, latency, static mapping configuration, persistence requirements, fail over logic, weighting parameters, and others, each of which can be alone or combined."

The reproduced section above notably does not discuss advertising or discontinuing advertising. Importantly, the above section points out that the DNS server is a fully functioning DNS server. As such, the DNS server in Swildens performs the functions that are commonly performed by DNS servers. Specifically, Swildens' traffic management system DNS server provides for name and address resolution when queried by a local client DNS server. *Swildens* at [0040].

By contrast, claim 1 relates to "advertising" an address on the network and discontinuing advertising of the address when a system is overloaded. The term advertising does not relate to resolving names and addresses in response to a DNS request, but rather advertising refers to a node announcing (or not announcing) its own availability. See, e.g., *Application* [0034]. In addition, as discussed above, those skilled in the art would not interpret "advertising" as resolving a name and address in response to a DNS inquiry, as the Office is trying to do.

Furthermore, rather than teaching or suggesting discontinuing advertising an address when a node is overloaded, Swildens teaches *giving out* an IP address of *another server* when one of the servers fails. *Swildens*, [0200]. For example, "if one IP address is attacked and becomes unavailable, another will then appear and traffic will be routed to it." *Id.* Thus, rather than teaching or suggesting discontinuing publishing of an IP address of a failed server, Swildens specifically states that another IP address will "*not* [be] published until the failure occurs." *Id.*

In addition, the Myers publication (U.S. Patent Publication 2003/0079005) fails to make up for the deficiencies of Swildens. Myers relates to a system for wide area network routing, and more particularly to a server network architecture overlaid on the wide area network and the use of local area network style protocol in connection with the server network to automatically configure the server network to achieve efficient routing and caching. *Myers*, [0004]. Myers' overlay controls how packets are routed from one portion of the wide area network to another by routing packets through nodes of the overlay. *Id.*, [0046]. The undersigned has reviewed Myers and can find no teaching of discontinuing advertising of the cache server system by an associated DNS device for each cache server system having a load characteristic that exceeds the predefined overload metric.

For at least the above reasons, Swildens and Myers fail to teach or suggest at least one element of claim 1. As such, claim 1 is believe to be allowable. Claims 2 – 7 and 9 each depend from claim 1 in some form, and are therefore believe to be allowable for at least the same reasons.

Rejections under 35 U.S.C. § 103(a)

The Office has rejected claim 3 as being unpatentable over Swildens in view of Myers. Applicant traverses this rejection.

Applicant acknowledges the Office's admission that Swildens fails to teach the method of claim 3, wherein the advertising act comprises sending routing information to a plurality of

routers in the network in accordance with BGP. The Office asserts that Myers teaches this element.

Specifically, the Office points to [0011] of Myers, which is reproduced here:

> "[0011] Border Gateway Protocol (BGP), the routing protocol that the Internet uses, is not designed to exploit alternate paths to improve performance. BGP has three main goals: basic connectivity, extreme stability, and massive scalability. Each router on the Internet that participates in the BGP protocol only advertises a single route to each possible destination. In other words, BGP explicitly discards information about alternate routes. While this might decrease the quality of the network's routing, it does help to achieve the goals of scalability by decreasing the amount of data exchanged between routers." *Myers*.

Admittedly, the above reproduced section of Myers discloses some aspects of BGP. However, based on this, the Office makes the purely conclusory assertion that "it would have been obvious … to implement the teaching of Myers to advertise the address to the routers in the network in accordance with BGP protocol such that the specific cache server be targeted for serving the content to the clients." The Office provides no support for the foregoing statement. It is well understood that "…conclusory statements regarding the teaching of multiple references, standing alone, are not evidence." In re Dembiczak 175 F.3d 994, 999, 50 USPQ2d 1614, 1615 (Fed. Cir. 1999). The Office's alleged evidence is that BGP explicitly discards information about alternate routes because "it does help to achieve the goals of *scalability* by decreasing the amount of data exchanged." Rather than supporting the Office's assertion that Myers teaches using the BGP protocol so that the specific cache server will be targeted for serving the content to the clients, the Office's alleged evidence discusses using BGP to achieve scalability in a network by decreasing the amount of data exchanged.

As such, the Office's alleged evidence to support the combination of Myer and Swildens is not evidence at all. Therefore, the Office has failed to present a *prima facie* case of obviousness. Therefore, for this additional reason, claim 3 is believed to be allowable.

Conclusion

Claims 1-7, 9, and 14 – 15 are now pending in the application and are believed to be allowable over the cited prior art for at least the reasons stated herein. Accordingly, prompt reconsideration and allowance of this application are earnestly solicited. Should the Examiner
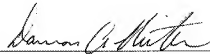
have any remaining questions or concerns, he/she is encouraged to contact the undersigned attorney by telephone to expeditiously resolve such concerns.

Respectfully submitted,

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